

October 21, 2020

CLINICAL PEARL

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• **COVID-19 is known to affect multiple organ systems, including the gastro-intestinal tract.** <u>Critically ill</u> <u>patients with COVID-19 often develop gastrointestinal complications during their hospital stay</u>, including transaminitis, bowel ischemia, gastrointestinal bleeding, pancreatitis, Ogilvie syndrome, and severe ileus.

Researchers from Massachusetts General Hospital compared the incidence of gastrointestinal complications in critically ill patients with COVID-19-induced acute respiratory distress syndrome (ARDS) and in comparably ill patients with non-COVID-19 ARDS. The study found a higher rate of gastrointestinal complications in critically ill patients with COVID-19 compared with propensity score-matched patients without COVID-19, suggesting a distinct phenotype for COVID-19 compared with conventional ARDS. A total of 486 patients with ARDS met eligibility criteria, of which 244 had non-COVID-19 ARDS and 242 had COVID-19 ARDS. The median age of patients was 60.5 years and 62 years for patients with and without COVID-19, respectively, and the percentage of males was 66.5% and 54.9%, respectively. Patients with COVID-19 were more likely to develop gastrointestinal complications compared with those without COVID-19 (74% vs 37%). Specifically, patients with COVID-19 developed more transaminitis (55% vs 27%), severe ileus (48% vs 22%), and **bowel ischemia** (4% vs 0%). Three of the 4 patients with COVID-19 and bowel ischemia were taken to the operating room and had intraoperative findings consistent with COVID-19 bowel as previously described in different patients. Pathology findings demonstrated fibrin thrombi in the microvasculature underlying areas of necrosis. High expression of angiotensin-converting enzyme 2 receptors along the epithelial lining of the gut that act as host-cell receptors for SARS-CoV-2 could explain the involvement of abdominal organs. Higher opioid requirements and COVID-19-induced coagulopathy may also explain the disproportionately high rate of ileus and ischemic bowel disease seen in critically-ill COVID-19 patients.

RESOURCES

- IDSA Podcast: From Halloween to Hanukkah: What Will Holidays Look Like During COVID-19?
- UCSF Special Medical Grand Rounds <u>President Trump's Covid-19 Diagnosis: Implications for Transmission,</u> <u>Treatment, and Prognosis</u>

ACADEMIC/RESEARCH PAPERS

- medRxiv
 - o <u>Repurposed antiviral drugs for COVID-19; interim WHO SOLIDARITY trial results</u>
 - o Virus detection and identification in minutes using single-particle imaging and deep learning
- International Journal of Infectious Diseases
 - o <u>Early Hydroxychloroquine but not Chloroquine use reduces ICU admission in COVID-19 patients</u>
- JAMA
 - o <u>COVID-19 and Excess All-Cause Mortality in the US and 18 Comparison Countries</u>
 - o Excess Deaths From COVID-19 and Other Causes, March-July 2020
 - o <u>Excess Deaths and the Great Pandemic of 2020</u>
- Blood Advances
 - The association of ABO blood group with indices of disease severity and multiorgan dysfunction in COVID-19
 - o <u>Reduced prevalence of SARS-CoV-2 infection in ABO blood group O</u>





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COVID-19 Digest Issue 26

- Clinical Infectious Diseases
 - o The household secondary attack rate of SARS-CoV-2: A rapid review
 - o <u>Reinfection of SARS-CoV-2 in an immunocompromised patient: a case report</u>
- The Lancet
 - o <u>Genomic evidence for reinfection with SARS-CoV-2: a case study</u>
 - o Lessons from New Zealand's COVID-19 outbreak response
 - o Scientific consensus on the COVID-19 pandemic: we need to act now
 - <u>Clinical impact of molecular point-of-care testing for suspected COVID-19 in hospital (COV-19POC): a</u> prospective, interventional, non-randomised, controlled study
- Diagnostic Microbiology and Infectious Disease
 - <u>Comparative study of four SARS-CoV-2 Nucleic Acid Amplification Test (NAAT) platforms demonstrates</u> that ID NOW performance is impaired substantially by patient and specimen type
- Journal of Infection
 - o <u>The duration of infectiousness of individuals infected with SARS-CoV-2</u>
- Science Immunology
 - <u>Persistence and decay of human antibody responses to the receptor binding domain of SARS-CoV-2</u> <u>spike protein in COVID-19 patients</u>
- Emerging Infectious Diseases
 - <u>Cellular Immunity in COVID-19 Convalescents with PCR-Confirmed Infection but with Undetectable</u> <u>SARS-CoV-2–Specific IgG</u>
 - o Superspreading Event of SARS-CoV-2 Infection at a Bar, Ho Chi Minh City, Vietnam
 - o <u>Coronavirus Disease among Workers in Food Processing, Food Manufacturing, and Agriculture</u> <u>Workplaces</u>
- Nature Communications
 - o <u>Analysis of SARS-CoV-2 vertical transmission during pregnancy</u>
- Pediatrics
 - o <u>COVID-19 Transmission in US Child Care Programs</u>
- Early Human Development
 - o Holidays over: A review of actual COVID-19 school outbreaks up to September 2020
- Infection Control and Hospital Epidemiology
 - o Prolonged incubation of SARS-CoV-2 in a Patient on Rituximab Therapy
- Annals of the American Thoracic Society
 - Improving Prone Positioning for Severe ARDS during the COVID-19 Pandemic: An Implementation Mapping Approach
- Critical Care
 - Awake prone positioning does not reduce the risk of intubation in COVID-19 treated with high-flow nasal oxygen therapy: a multicenter, adjusted cohort study
- Rheumatology
 - <u>Baricitinib improves respiratory function in patients treated with corticosteroids for SARS-CoV-2</u> pneumonia: an observational cohort study
- National Institute for Health Research
 - o Living with Covid Themed Review
- BMJ Journals
 - o <u>Sudden irreversible hearing loss post COVID-19</u>





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COVID-19 Digest Issue 26

- Genetics in Medicine
 - Individuals with Down syndrome hospitalized with COVID-19 have more severe disease
- Diabetologia
 - <u>Antibody response to multiple antigens of SARS-CoV-2 in patients with diabetes: an observational</u> <u>cohort study</u>
- JAMA Ophthalmology
 - <u>Severe Acute Respiratory Syndrome Coronavirus 2 Nucleocapsid Protein in the Ocular Tissues of a</u> <u>Patient Previously Infected With Coronavirus Disease 2019</u>
- Academic Emergency Medicine
 - Increased Incidence of Acute Pulmonary Embolism in Emergency Department Patients During the COVID-19 Pandemic
- Internal and Emergency Medicine
 - <u>Clinical characteristics and outcomes in elderly with coronavirus disease 2019 in Beijing, China: a</u> retrospective cohort study
- PNAS
 - Experimental infection of domestic dogs and cats with SARS-CoV-2: Pathogenesis, transmission, and response to reexposure in cats
- United States Transportation Command (USTRANSCOM) & Air Mobility Command (AMC)
 - o <u>TRANSCOM/AMC Commercial Aircraft Cabin Aerosol Dispersion Tests</u>

MMWR

- Transmission Dynamics by Age Group in COVID-19 Hotspot Counties United States, April–September 2020
- Race, Ethnicity, and Age Trends in Persons Who Died from COVID-19 United States, May–August 2020
- Factors Influencing Risk for COVID-19 Exposure Among Young Adults Aged 18–23 Years Winnebago County, Wisconsin, March–July 2020
- An Outbreak of COVID-19 Associated with a Recreational Hockey Game Florida, June 2020
- <u>Demographic Characteristics, Experiences, and Beliefs Associated with Hand Hygiene Among Adults During</u> <u>the COVID-19 Pandemic — United States, June 24–30, 2020</u>

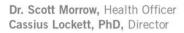
HOT OFF THE (LAY) PRESS

- Science
 - o <u>Remdesivir and interferon fall flat in WHO's megastudy of COVID-19 treatments</u>
- The New York Times
 - o <u>Remdesivir Fails to Prevent Covid-19 Deaths in Huge Trial</u>
 - White House embraces a declaration from scientists that opposes lockdowns and relies on 'herd immunity.'
 - o <u>'We are headed in the wrong direction': The U.S. records its highest tallies since July</u>
 - o London tightens restrictions as a second wave of virus cases washes over Europe.
 - o <u>France extends virus rules to the entire country as new cases threaten to overwhelm hospitals.</u>
 - o <u>Coronavirus Confusion: Colts Report False Positives and Patriots Call Off Practice</u>
 - o <u>As the Coronavirus Surges, a New Culprit Emerges: Pandemic Fatigue</u>
 - o What to Know About California's New Rules for Gathering
 - o Migrant Workers Restricted to Farms Under One Grower's Virus Lockdown
 - o Did Lockdowns Lower Premature Births? A New Study Adds Evidence





- <u>Latino and Black Americans are still dying in disproportionately high</u> <u>numbers, the C.D.C. says.</u>
- o <u>'I Feel Like I Have Dementia': Brain Fog Plagues Covid Survivors</u>
- o Pfizer confirms it won't seek authorization for its vaccine before the second half of next month
- o <u>Governors Ask How Vaccines Will Be Distributed</u>
- The Hill
 - o Bipartisan governors ask Trump for help with COVID vaccine distribution plan
 - o Loss for everyone as CDC's standing erodes
- Propublica
 - o Inside the Fall of the CDC
- IDSA News
 - o <u>"Herd Immunity" is Not an Answer to a Pandemic</u>
- Pfizer
 - o OUR PROGRESS IN DEVELOPING A POTENTIAL COVID-19 VACCINE
- Reuters
 - o Pfizer to enroll kids as young as 12 in COVID-19 vaccine study
 - o J&J says review of illness that led to pause of coronavirus vaccine trial could take days
 - o YouTube bans coronavirus vaccine misinformation
 - o U.S. pauses Eli Lilly trial of antibody drug Trump touted as COVID-19 'cure' over safety concern
 - o Eli Lilly says other COVID-19 antibody drug trials ongoing after study halted for safety concern
- MedPage Today
 - o COVID-19 Antibodies Raise Unanswered Clinical Questions
- NPR/KQED
 - o Facing Many Unknowns, States Rush To Plan Distribution Of COVID-19 Vaccines
 - o <u>Trump Announces Partnership With CVS, Walgreens For Nursing Home COVID Vaccination</u>
 - o More Companies Are Using Technology To Monitor For Coronavirus In The Workplace
 - o <u>'I'm Still Unemployed': Millions In Dire Situation As Savings Start To Run Out</u>
 - o <u>What's Coming This Winter? Here's How Many More Could Die In The Pandemic</u>
 - o How Bad Will Coronavirus Be This Winter? Model Projects 170,000 More U.S. Deaths
 - o Coronavirus Test Results Get Faster, But Still Too Slow To Help Slow Disease Spread
- University of Oxford News
 - o Oxford scientists develop extremely rapid diagnostic test for Covid-19
- Time
 - o At-Home Saliva Tests for COVID-19 Could Be Coming Soon
- Bloomberg
 - o Illumina and IDbyDNA Launch DNA Test That May Find Next Epidemic
 - o Rapid New Covid-19 Test From Access Bio Cleared in U.S.
 - o <u>Starbucks Cafe's Covid Outbreak Spared Employees Who Wore Masks</u>
- BBC News
 - o Covid: One-way 'travel bubble' opens between Australia and NZ
- The Wall Street Journal
 - o <u>Can Airport Covid Testing Get People Flying Again?</u>
- The Washington Post
 - <u>Defense Department study finds low risk of coronavirus infection through air on a packed airline flight</u>
 - o <u>These U.S. airlines are offering pre-flight covid-19 testing for a price</u>



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- o <u>U.S. tops 60,000 daily coronavirus infections for first time since early</u> <u>August</u>
- o <u>Coronavirus cases hit records in Europe, surpassing U.S. numbers</u>
- o <u>A Canadian spin studio followed public health guidelines. But 61 people still caught the coronavirus.</u>
- o <u>Young and healthy? You may have to wait until 2022 for a covid-19 vaccine, experts warn.</u>
- o <u>Trying to reach herd immunity is 'unethical' and unprecedented, WHO head says</u>
- o Trump again attacks Fauci's guidance as coronavirus infections tick upward
- o <u>A pandemic pod could help you get through winter, experts say. Here's how to form one.</u>
- <u>With video calls and an army of volunteers, this 15-year-old is battling pandemic loneliness in nursing homes</u>
- WebMD
 - o <u>Small Household Gatherings Driving COVID Increase</u>
- USA Today
 - o <u>COVID-19 cases in US grow at a speed not seen since July, the summer peak</u>
- Nature News
 - o What it's really like to do science amid COVID-19
- STAT News
 - o <u>Results are coming in on the AI systems built at the height of New York City's spring Covid-19 outbreak</u>
 - <u>STAT-Harris Poll: The share of Americans interested in getting Covid-19 vaccine as soon as possible is</u> <u>dropping</u>
 - o <u>Pfizer won't apply for Covid-19 vaccine authorization before mid-November, CEO confirms</u>
- Mercury News
 - o Eight months in, California is containing COVID-19 as other states spike. Here's why.
 - o Kaiser Permanente cited for failing to treat COVID-19 as airborne
- SF Gate
 - o <u>Stanford professor's anti-lockdown movement faces fierce resistance</u>
- San Francisco Chronicle
 - o Gilroy nursing home reports 12 coronavirus deaths, 75 infections
 - o <u>Google expands S.F. office despite shift to working from home during pandemic</u>
- KRON4
 - o Marin Catholic suspends hybrid learning for 2 weeks

EPIDEMIOLOGY UPDATES

- US Leads the World in Confirmed COVID-19 Cases per Johns Hopkins University Center for Systems Science and Engineering Dashboard Website
- Johns Hopkins COVID-19 in the USA daily summary of key data on COVID-19 in the U.S.
- California COVID-19 by the numbers are available on the <u>CDPH Website</u> and the <u>NYT Map and</u> <u>Table</u> (includes data by county)
 - o California COVID-19 Statewide Update as of October 21, 2020
- San Mateo County COVID-19 Dashboard
- Santa Clara County COVID-19 Dashboard



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ADDITIONAL COVID-19 RESOURCES

- San Mateo County COVID-19 Guidance and Resources for Clinicians and Facilities COVID-19 Digests
- Palo Alto Online tracking the coronavirus in San Mateo and Santa Clara counties
- <u>California COVID-19 Data and Tools</u>
- <u>CDPH COVID-19 Assessment and Modeling Tool</u>
- <u>California Department of Corrections and Rehabilitations Population COVID-19 Tracking Dashboards</u>
- <u>COVID-19 Nursing Home Data</u>
- <u>CDC Interactive Serology Dashboard for Commercial Laboratory Surveys</u>
- CDC COVID-19 Forecasts: Deaths
- HHS Coronavirus Data Hub

